

Headquarters  
U.S. Army Armor Center and Fort Knox  
Fort Knox, Kentucky 40121-5000  
28 November 1990

USAARMC Reg 385-1

## Safety

### HAZARD COMMUNICATION PROGRAM

**Summary.** This regulation provides policy and guidelines concerning the Fort Knox Hazard Communication Program.

**Applicability.** This regulation applies to all U.S. Army Armor Center (USAARMC) subordinate commands, directorates, staff offices/departments, and tenant commands, this headquarters.

**Supplementation.** Supplements are prohibited without prior approval from the Armor Branch Safety Office (ABSO).

**Suggested improvements.** The proponent of this regulation is the Armor Branch Safety Office. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commander, USAARMC and Fort Knox, ATTN: ATZK-S, Fort Knox, KY 40121-5000.

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1. **Purpose.** This regulation establishes policy and procedures for implementation of the Hazard Communication Standard, Title 29 Code of Federal Regulations 1910.1200, to include hazardous chemical information and training.

## 2. References.

a. Title 29 CFR 1910.1200 (General Industry, Occupational Safety and Health Administration (OSHA) Hazard Communication Standard).

b. Title 29 CFR 1910.60 (OSHA), Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters.

c. Federal Standard No. 313, Material Safety Data Sheet (MSDS) Preparation and the Submission Of.

d. AR 385-10, 23 May 88, Army Safety Program.

e. AR 700-141, 20 Jan 87, Hazardous Material Information System (HMIS).

f. HQDA Ltr 11-88-2, 1 Jun 88, Implementation of Hazard Communication Program.

g. Federal Acquisition Regulation Subpart 23.3 (Hazardous Material Identification and Material Safety Data).

3. Policy. This is a mandatory program and all USAARMC personnel must comply with the Hazard Communication Program as outlined below. The following requirements shall be implemented:

a. Each organization within USAARMC will inventory all chemicals used within their organization. The ABSO will assist in identifying which are hazardous items in the inventory. The Hazardous Chemical Inventory will be updated as new materials arrive in the unit inventory. The inventory and the location of the Material Safety Data Sheets will be posted in the vicinity of the Fire Evacuation Plan on the bulletin board.

b. Material Safety Data Sheets (MSDS) will be obtained for all hazardous chemicals in the inventory. Copies of the material safety data sheet for hazardous chemicals in a given work site are to be readily accessible to employees in that area.

c. Hazardous warning labels will be affixed and maintained on all hazardous chemical containers showing hazard warnings appropriate for employee protection. See appendix B.

d. An employee training program will be developed and conducted to ensure all USAARMC employees are aware of their rights under the OSHA Hazard Communication Standard (HCS); are

instructed in the use of, and information contained on hazardous labels and MSDS; and know how and where to gain access to this information.

4. Responsibilities.

a. Commander, USAARMC will:

(1) Ensure a Hazard Communication Program (HCP) is established and implemented to inform all USAARMC employees of the hazards associated with the chemicals in their work area.

(2) Ensure funding is made available to implement and maintain the Hazard Communication Program as outlined herein.

b. Armor Branch Safety Office will:

(1) Oversee the HCP.

(2) Maintain the installation hazardous chemical log based on information received from the units.

(3) Maintain the installation master file of MSDSs.

(4) Monitor unit's Chemical Hazard Inventory Log during the Standard Army Safety and Occupational Health Inspection performed annually.

(5) Provide the initial training for the Federal Hazard Communication program.

(6) Establish suspense file for receipt of MSDSs.

(7) Monitor effectiveness of employees hazard communication training through an established inspection program.

(8) If MSDS is not available, assist user in obtaining MSDS.

c. MEDDAC, Preventive Medicine Service, will:

(1) Assist in determining employees to be trained through the Health Hazard Inventory Module (HHIM).

(2) Interpret MSDS data for units upon request.

(3) Conduct or coordinate medical surveillance and health hazard training for military and civilian employees potentially exposed to occupational health hazards per AR 40-5, 30 Aug 86, Preventive Medicine.

(4) Provide copies of surveys HHIM to ATZK-S upon request.

(5) If MSDS is not available, assist user and/or ABSO in obtaining MSDS.

d. Civilian Personnel Office (CPO) will ensure documentation for hazard communication training is made in the employee's Official Personnel File (OPF) after receiving the DD Forms 1556 (Request, Authorization, Agreement, Certification of Training and Reimbursement) from the ABSO.

e. Adjutant General (AG) will ensure documentation procedures for hazard communication training to military personnel are made in the soldier's 201 file after receiving the DD Forms 1556 from the ABSO.

f. Director of Contracting will:

(1) Comply with requirements of Subpart 23.3 FAR 52.223-3.

(2) Ensure the least hazardous chemical is purchased for the intended task. The manufacturer should be required to submit an MSDS for the chemical they want to provide so the ABSO can assist in determining the least hazardous chemical to purchase.

(3) If MSDS is not received with shipping documents, contact manufacturers supplying hazardous chemicals and request MSDS be forwarded as soon as possible.

(4) Forward one copy of the MSDS to ATZK-S, and one copy to supply warehouse/receiving unit.

(5) Forward a copy of solicitation or contract identifying delivery of any hazardous material to ATZK-S.

(6) Ensure government hazardous material policy is explained to contractors during post award orientation conferences and documented in the minutes.

g. Director of Logistics (DOL) will:

(1) Comply with AR 700-141.

(2) Whenever possible, request the least hazardous chemicals when procuring chemicals for DOL personnel.

(3) Ensure receipt of MSDS with shipment of hazardous chemicals.

(4) Provide MSDS to user at time of issue.

(5) Maintain a current list of hazardous chemicals used by DOL personnel.

(6) Provide ATZK-S a copy of Safety Hazardous Information Tracking System (TRACKER) monthly.

h. Director of Engineering and Housing (DEH) will:

(1) Ensure receipt of MSDS with shipment of hazardous chemicals.

(2) Provide MSDS to user at time of issue from warehouse if MSDS has not previously been issued.

(3) Maintain a current list of all hazardous chemicals used by DEH personnel.

i. Commanders, directors and chiefs, staff offices/departments will ensure:

(1) An individual is appointed to coordinate the hazard communication program within their organization and act as the central point of contact. Provide the name and phone number to the ABSO.

(2) All elements of this program are complied with.

(3) This regulation, the organization's hazard chemical inventory, and applicable MSDSs are readily available for personnel working with hazardous chemicals.

j. Unit will:

(1) Update the unit hazardous chemical inventory as new chemicals arrive in the unit and forward copy to ATZK-S.

(2) Schedule initial training for newly assigned military/civilian personnel by contacting ATZK-S, at 4-4834/3811.

(3) Prepare a Standing Operating Procedure (SOP) covering the use of chemical compounds, safe handling procedures, measures, protective clothing, and equipment employees must use.

k. Supervisors will:

(1) Maintain an inventory of all hazardous chemicals used in the workplace and forward copy as updated to ATZK-S.

(2) Maintain MSDS on all hazardous chemicals used in the workplace, and make readily available to employees. If MSDS is not available, contact ATZK-S, 4-4834/3811.

(3) Train employees on specific hazards associated with the chemicals used in their workplace and protective measures to prevent injury/exposure to hazardous chemicals.

(4) Apprise employees performing nonroutine tasks of any hazardous chemicals they may use or come in contact with and protective measures to prevent exposure.

1. Unit S-4s will:

(1) Ensure receipt of MSDS with shipment of hazardous chemicals.

(2) Provide MSDS to user at time of issue.

5. Procedures.

a. Identification of hazardous substances.

(1) Labeling shall provide workers with baseline information on the substance(s) to which they are exposed. A label is not intended to provide full information on the substance.

(2) Each container of toxic substances in the workplace shall be labeled with the chemical name and the appropriate hazard warnings. See appendix B for additional information.

(3) Containers into which a toxic substance or mixture is being transferred from a labeled container, and which is intended for immediate use by the employee making the transfer, are exempt from labeling.

(4) Containers must be individually labeled. The labels must be affixed and displayed in such a manner that employees can easily identify the hazardous substance contained within.

(5) New labels need not be affixed if existing labels convey the necessary information.

(6) Questions on proper labeling for newly received materials may be referred to the ABSO.

(7) If labeling or relabeling is required, the user shall complete DOD hazardous chemical label, and affix same to

all individual hazardous chemical containers. Known or suspect carcinogen containers will be labeled to properly identify the contents with "DANGER-CHEMICAL CARCINOGEN."

(8) Information on DOD hazardous chemical label shall include the chemical name and the name of the manufacturer, importer, or responsible party, and appropriate hazards. No container will be used until the above data is substantiated.

(9) The chemical/common name on the DOD label shall be the same as shown on the MSDS.

(10) Hazardous wastes must also meet the labeling requirements of the Environmental Protection Agency. Units generating hazardous wastes will contact the Environmental Management Division, at 4-3629, to obtain proper hazardous waste labels.

(11) Chemicals used in laboratories need not be relabeled if all of the following conditions are satisfied:

(a) Labels on incoming containers of hazardous chemicals are not defaced or removed.

(b) Test tubes, flasks, and beakers need not be labeled.

b. Material Safety Data Sheets.

(1) Contents of any MSDSs used on Fort Knox must meet OSHA requirements. All elements of the MSDS will be completed. Samples of MSDS are at appendix C.

(2) Fort Knox activities producing or compounding hazardous chemicals will contact ABSO for acquisition of MSDS.

(3) MSDS for locally purchased items and nonstandard stock hazardous chemicals will be required, obtained, and will be maintained in the Fort Knox MSDS master file.

(4) If a MSDS is not received with a locally purchased hazardous chemical, the supervisor will contact ABSO. The hazardous chemical will not be used until a MSDS is available.

(5) Identification of a hazardous material and correct matching to its MSDS is required. Critical differences exist between similarly named chemicals/products from different manufacturers. Questions will be resolved through consultation with ABSO. Material Safety Data Sheets provided directly from suppliers will be reviewed by the ABSO.

(6) All personnel will have ready access during each work shift to MSDS applicable to their work area. Accessibility will be achieved by placing copies in the immediate work area or by providing rapid response from a centralized MSDS file. Employees who question the safe use of a material will not be required to use it until an approved MSDS is provided and the hazards and protective procedures explained.

(7) Questions pertaining to MSDSs will be referred to the Preventive Medicine Service or ABSO.

(8) Protection of trade secret information is required. Data contained in the limited release edition of the hazardous materials information system will be treated in the same manner as "For Official Use Only" information. Lawful restrictions on the use of information provided directly by manufacturers or suppliers must be honored. Penalties are applicable in case of unauthorized release.

FOR THE COMMANDER:



WALTER J. LYSSY  
LTC, SC  
Director, Information Management

OFFICIAL:  
CLAUDE W. ABATE  
Colonel, GS  
Chief of Staff

DISTRIBUTION:

A plus

1,000 - ATZK-S

5 - ATSB-TDL

CF:

Asst Comdt, USAARMS



## HAZARD COMMUNICATION PROGRAM

The following is an explanation of terms used.

- a. "Chemical" means any element, chemical compound, or mixture of elements and/or compounds.
- b. "Chemical name" means the scientific designation of a chemical, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.
- c. "Combustible liquid" means any liquid having a flashpoint at or above 100 degrees F (37.8 C), but below 200 degrees F (93.3 C), except any mixture having components with flashpoints of 200 F or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.
- d. "Common name" means any designation or identification such as code name, code number, trade name, brand name, or generic name used to identify a chemical other than by its chemical name.
- e. "Container" means any bag, barrel, bottle, box, can cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical.
- f. "Employee" means any worker employed by Fort Knox, military or civilian, who may be exposed to hazardous chemicals under normal operating conditions or foreseeable emergencies. Office workers, ground maintenance workers, security personnel, or nonresident management are generally not included, unless their job performance routinely involves potential exposure to hazardous chemicals.
- g. "Explosive" means a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.
- h. "Exposure or Exposed" means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact, or absorption, etc.), and includes potential (e.g., accidental or possible) exposure.
- i. "Flammable" means a chemical falls into one of the following categories:
  - (1) "Aerosol, flammable" means an aerosol that yields a flame projection exceeding 18 inches at full valve opening, or a flashback at any degree of valve opening.

(2) "Gas, flammable" means a gas that, at ambient temperature and pressure, pressure forms a range of flammable mixtures with air at a concentration of 13 percent by volume or less; or a gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than 12 percent of volume, regardless of the lower limit.

(3) "Flammable liquid" means any liquid having a flashpoint below 100 degrees.

(4) "Flammable solid" means a solid, other than blasting agents, that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing process.

j. "Flashpoint" means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite in the presence of an ignition source.

k. "Foreseeable emergency" means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrollable release of a hazardous chemical into the workplace.

l. "Hazardous chemical" means a chemical that is either toxic; an irritant; corrosive; a strong oxidizer; a strong sensitizer; combustible; flammable; dangerously reactive; pyrophoric or pressure generating; or that otherwise may cause substantial acute or chronic personal injury or illness during or, as a direct result of, any customary or reasonably foreseeable handling or use. NOTE: Hazardous Chemical and Hazardous Material will be used synonymously throughout this regulation.

m. "Immediate use" means that the hazardous chemical will be under the control of and used by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

n. "Label" means any written, printed, or graphic material, displayed on, or affixed to containers of hazardous chemicals.

o. "Material Safety Data Sheet (MSDS)" means written or printed material concerning a hazardous chemical which is prepared in accordance with 29 CFR 1910.1200.

p. "Oxidizer" means a chemical other than a blasting agent that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

q. "Physical hazard" means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive), or water-reactive.

r. "Use" means to package, handle, react, or transfer.

s. "Work area" means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

t. "Workplace" means an establishment, job site, or project, at one geographical location containing one or more work areas.

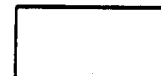
## Data Elements of DOD Label

Chemical/Common Name: Methanol, Wood Alcohol

NSN/LSN: 5910-01-018-3021

Part Number: 5160-081

Item Name:



HAZARD CODE

## HAZARDS

ACUTE  
(IMMEDIATE)CHRONIC  
(DELAYED)

NONE SLIGHT MODERATE SEVERE

HEALTH		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CONTACT		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
FIRE		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
REACTIVITY		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## SPECIFIC HAZARDS and PRECAUTIONS (INCLUDING TARGET ORGAN EFFECTS)

DANGER! Flammable Liquid

Acute: Overexposure to vapors may cause drowsiness, headache, nausea, visual disturbances, blindness. May irritate lungs and cause coughing, shortness of breath, collapse and death. Liquid is absorbed through intact skin. Causes skin and eye irritation.

Chronic: May damage the central nervous system; may cause liver enlargement; may cause blindness.

Flammable! Avoid oxidizers, active metals, e.g. aluminum, zinc.

**PROTECT:** EYE ☒ SKIN ☒ RESPIRATORY ☒

Name ABC Chemical Company

Address 2345 Flower Street, Any City, NW 00078

Emergency Telephone (978) 555-0987

See MSDS for Further Information

DD FORM \_\_\_\_\_

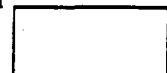
YEAR 1988

Chemical/Common Name: 1,1,1-Trichloroethane, Methyl Chloroform

NSN/LSN: 6810-00-292-9625

Part Number: 0-T-620

Item Name: 1,1,1-Trichloroethane, Technical



HAZARD CODE

## HAZARDS

**ACUTE**  
(IMMEDIATE)

**CHRONIC**  
(DELAYED)

NONE SLIGHT MODERATE SEVERE

HEALTH		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CONTACT		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FIRE		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
REACTIVITY		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## SPECIFIC HAZARDS and PRECAUTIONS (INCLUDING TARGET ORGAN EFFECTS)

### DANGER!

**Acute:** Overexposure to vapors may cause headache, dizziness, unconsciousness, irregular heart beat and death. Prolonged or repeated skin contact may cause skin irritation.

**Chronic:** High concentration may cause reproductive abnormalities. Avoid open flames and high temperatures; in fire, highly toxic fumes emitted.

**PROTECT:** EYE ☒ SKIN ☒ RESPIRATORY ☒

Name ABC Chemical Company

Address 2345 Spring Street, Anytown, TA 00234

Emergency Telephone (987) 555-0987

See MSDS for Further Information

DD FORM \_\_\_\_\_

YEAR 1988

## CHEMICAL NAME

**HAZARD:**

Irritant, Moderate Eye

**CAUTION!**

**MAY CAUSE EYE IRRITATION**

Avoid contact with eyes.

Wash thoroughly after handling

**FIRST AID:** In case of contact, immediately flush eyes with plenty of water.  
Call a physician if irritation persists.

For additional information, see Material Safety Data Sheet (MSDS) for this chemical.

**ABC CHEMICAL COMPANY**

One Industrial Drive  
Anytown, NJ 08010

## CHEMICAL NAME

**HAZARDS:**

Irritant, Severe Respiratory

Toxic by Absorption

Liquid

**WARNING!**

**CAUSES RESPIRATORY TRACT IRRITATION**

**HARMFUL IF ABSORBED THROUGH SKIN**

Avoid breathing vapor or mist

Avoid contact with eyes, skin, and clothing.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

**FIRST AID:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

For additional information, see Material Safety Data Sheet (MSDS) for this chemical.

### ABC CHEMICAL COMPANY

One Industrial Drive  
Anytown, NJ 08010

## CHEMICAL NAME

### HAZARDS OF MIXTURE:

Irritant, Severe Skin, Moderate Eye

Kidney Damage (Delayed) Based on Animal Data

Nervous System Damage (Delayed) Based on Animal Data

Components A and B Contribute Substantially to the Hazards

### WARNING!

**CAUSES SKIN AND MAY CAUSE EYE IRRITATION**

**CONTAINS "A" WHICH MAY CAUSE KIDNEY DAMAGE AND NERVOUS  
SYSTEM EFFECTS BASED ON ANIMAL DATA**

Risk of damage and effects depends upon duration and level of exposure

**Avoid contact with eyes, skin and clothing.**

**Wash thoroughly after handling.**

**FIRST AID: In case of contact, immediately flush eyes and skin with plenty of  
water. Call a physician. Wash clothing before reuse.**

**Contains B.**

For additional information, see Material Safety Data Sheet (MSDS) for this material.

**ABC CHEMICAL COMPANY**

**One Industrial Drive**

**Anytown, NJ 08010**



## CHEMICAL NAME

**HAZARDS OF MIXTURE:**

Strong Sensitizer. Lungs

Irritant. Severe Eye

Reproductive System Effects Based on Animal Data

**DANGER!**

**MAY CAUSE SEVERE ALLERGIC RESPIRATORY REACTION**

**CAUSES EYE IRRITATION**

**CONTAINS MATERIAL WHICH MAY CAUSE REPRODUCTIVE SYSTEM  
EFFECTS BASED ON ANIMAL DATA**

**Do not breath dust or vapor.**

**Avoid contact with eyes.**

**Keep container closed.**

**Use only with adequate ventilation.**

**Wash thoroughly after handling.**

**FIRST AID:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately. Remove material from skin and clothing.

Before using, read Material Safety Data Sheet (MSDS) for this material.

**ABC CHEMICAL COMPANY**

One Industrial Drive  
Anytown, NJ 08010

**U.S. Department of Labor**

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072



Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

**Manufacturer's Name**

Emergency Telephone Number

**Address (Number, Street, City, State, and ZIP Code)**

Telephone Number for Information:

Date Prepared

Signature of Preparer (optional)

**Other Limits Recommended**

**Hazardous Components (Specific Chemical Identity; Common Name(s))**

OSHA PEL

ACGIH TLV

### Owner Limits Recommended

4% (optional)

### Boiling Point

**Specific Gravity ( $H_2O = 1$ )**

Vapor Pressure, (mm Hg.)

### Melting Point

**Vapor Density (AIR = 1)**

Evaporation Rate  
(Butyl Acetate = 1)

### Solubility in Water

### Appearance and Odor

## Flash Point (Method Used)

### Flammable Limits

LEL

UEL

## Extinguishing Mode

### Special Fire Fighting Procedures

### Unusual Fire and Explosion Hazards

### Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable		

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur		

### Section VI — Health Hazard Data

Route(s) of Entry:                      Inhalation?                      Skin?                      Ingestion?

Health Hazards (Acute and Chronic)

Carcinogenicity:                      NTP?                      IARC Monographs?                      OSHA Regulated?

Signs and Symptoms of Exposure

Medical Conditions  
Generally Aggravated by Exposure

Emergency and First Aid Procedures

### Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

Waste Disposal Method

Precautions to Be Taken in Handling and Storing

Other Precautions

### Section VIII — Control Measures

Respiratory Protection (Specify Type)

Ventilation	Local Exhaust	Special
	Mechanical (Generals)	

Protective Gloves	Eye Protection
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Other Protective Clothing or Equipment

Work/Hygienic Practices

**Material Safety Data Sheet**

May be used to comply with  
 OSHA's Hazard Communication Standard,  
 29 CFR 1910.1200. Standard must be  
 consulted for specific requirements.

**U.S. Department of Labor**

Occupational Safety and Health Administration  
 (Non-Mandatory Form)  
 Form Approved  
 OMB No. 1218-0072



**IDENTITY (As Used on Label and List)**  
 Crystal Clear

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

**Section I**

Manufacturer's Name

AAA Chemicals

Emergency Telephone Number

215-555-2456

Address (Number, Street, City, State, and ZIP Code)

100 A Street

Telephone Number for Information

215-555-2400

Anytown, NJ 99999

Date Prepared

6/12/85

Signature of Preparer (optional)

**Section II — Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Toluene	200 ppm	100 ppm		30
Methylene Chloride	500 ppm	100 ppm		25
Hexane	500 ppm	50 ppm		19
Propane	1000 ppm	N/A		10
Aromatic Naphtha (Stoddard Solvent)	500 ppm	100 ppm		2.0

Note: Propane functions as an aerosol propellant

**Section III — Physical/Chemical Characteristics**

Boiling Point	120°F	Specific Gravity (H <sub>2</sub> O = 1)	0.96
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	> 1	Evaporation Rate (Butyl Acetate = 1)	> 1

Solubility in Water

Insoluble

Appearance and Odor

Clear liquid with sweet, aromatic odor.

**Section IV — Fire and Explosion Hazard Data**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
< 20°F (For propellant)	N/A		

Extinguishing Media

Carbon Dioxide, Foam, Dry chemical

Special Fire Fighting Procedures

The contents are under pressure, when exposed to high temperature they will explode.

In case of fire, keep exposed containers cool.

Unusual Fire and Explosion Hazards

Contents are classified as "Extremely Flammable". They can be ignited readily.

NOTE: Fire Data is given for Propane, the most fire hazardous ingredient.

CRYSTAL CLEAR

**Section V — Reactivity Data**

Stability	Unstable		Conditions to Avoid Elevated (120°F) Temperature
	Stable	X	
Incompatibility (Materials to Avoid)			Keep away from all corrosives and active metal (Aluminum, Magnesium, Strong Oxidizers).
Hazardous Decomposition or Byproducts			Combustion Products: Carbon Monoxide; Carbon Dioxide, Phosgene; Hydrogen Chloride.
Hazardous Polymerization	May Occur		Conditions to Avoid N/A
	Will Not Occur	X	

**Section VI — Health Hazard Data**

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? NO
Health Hazards (Acute and Chronic) Central Nervous System Depressant - Symptoms include: dizziness, disorientation, confusion. CHRONIC: Liver & kidney damage will result from long term over-exposure. Symptoms of this effect will not be seen until years of exposure have existed.			

Carcinogenicity:	NTP? YES	IARC Monographs? NO	OSHA Regulated? NO
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Signs and Symptoms of Exposure  
Worker may appear drunk or confused; headache; nausea; skin-dry and irritated.

Eyes - burning and irritation.

Medical Conditions  
Generally Aggravated by Exposure Liver, kidney, conditions and ethanol dependency, respiratory tract conditions.

**Emergency and First Aid Procedures**

Remove the victim to fresh air if you can without harm to yourself. Begin CPR if breathing has stopped. For skin contact, wash with warm water. For eye contact, flush with water for at least 15 minutes.

**Section VII — Precautions for Safe Handling and Use**

Steps to Be Taken in Case Material is Released or Spilled  
Remove source of ignition. Soak up with absorbent material, and place in closed container. Ventilate area and place in closed container.

**Waste Disposal Method**

Dispose of as hazardous wastes in accordance with state and federal regulations.

**Precautions to Be Taken in Handling and Storing**

Do not store above 120°F. Excessive heat will cause containers to burst suddenly and violently. Combustion products are highly toxic.

**Other Precautions**

Vapors tend to collect in low areas.

**Section VIII — Control Measures****Respiratory Protection (Specify Type)**

Use self-contained breathing apparatus if vapor conc. above TLVs.

Ventilation	Local Exhaust	Not normally required when vapors conc. less than TLVs.	Special	N/A
	Mechanical (General)	Will often be adequate	Other	N/A

**Protective Gloves**

Neoprene or butyl rubber

**Eye Protection**

goggles

**Other Protective Clothing or Equipment**

Not normally required for aerosol usage.

**Work/Hygienic Practices**

N/A

## Unit Checklist for Hazard Communication Compliance

1. Is an individual appointed to coordinate the Hazard Communication Program within the unit?
2. Is there a hazardous chemical inventory covering all hazardous chemicals within the organization, and is the inventory list readily available to workers?
3. Is the hazardous chemical inventory kept up-to-date, and is the updated list forwarded to the Armor Branch Safety Office?
4. Is a copy of the hazardous chemical inventory and the location of the Material Safety Data Sheet's maintained on the unit bulletin board by the Fire Evacuation Plan?
5. Is there a Material Safety Data Sheet for each chemical in the inventory and are the MSDSs readily available for the worker's review?
6. Is there an SOP developed covering the execution of the hazardous chemical program within the unit?
7. Have all personnel who work with hazardous chemicals as a normal part of their duties been properly trained? (i.e., The Federal Hazard Communication Training Program, and unit specific training).
8. Are all hazardous chemical containers properly labeled?
9. Are all hazardous chemicals properly stored?
10. Have all personnel who work in facilities where hazardous chemicals are stored been informed of their presence and told what to do in case of emergency?